Original Article

ASSESSMENT OF THE KNOWLEDGE, ATTITUDE AND PRACTICE OF VOLUNTARY NON-REMUNERATED BLOOD DONATION AMONG RESIDENTS OF EKPOMA, A PERI-URBAN COMMUNITY IN EDO STATE.

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ABSTRACT

BACKGROUND: The importance of use of blood and blood products in medical practice cannot be over emphasized. Voluntary non remunerated blood donation forms the basis for ensuring regular availability of safe blood during blood donation and transfusion. However, volunteer blood donors account for less than one-half of blood supply in developing countries.

METHODOLOGY: To assess the knowledge, attitude and practice of voluntary blood donation by residents of a peri-urban community. A descriptive cross sectional study was carried out using a pre-tested semi-structured self-administered questionnaire among 422 respondents using the multistage sampling technique. The target population were residents of Ekpoma comprising the general public – workers, students of senior secondary schools and tertiary institutions. Variables were entered and analyzed using SPSS software package. The association between participants level of education and other socio-demographic factors was tested using chi square were appropriate.

RESULTS: The study involved 422 participants, majority of which were males (58.1%). A large proportion of them were between ages 16 and 26. The overall knowledge on blood donation was good, attitude towards voluntary donation was fair conversely practice was poor as 91.5% of respondents had never donated blood. A significant association was observed between sex and blood donation as only 2% of females have been donors. The commonest reason for not donating blood was fear to damage of health as reported in 40.7% of the participants.

CONCLUSION: This study elicits the importance of adopting effective measures in our communities to motivate voluntary blood donation as majority of the participant express willingness in donating blood in the future. Health awareness campaign and motivational programmes should be organized regularly to arouse the interest of the general public in voluntary blood donation exercises.

KEYWORDS: Knowledge, Attitude, practice, non-remunerated blood donation, Ekpoma

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INTRODUCTION

Transfusion of blood is an essential element to management of patients with various diseases.[1] Blood transfusion remains a vital aspect in the management of patients presenting with accidents, surgical conditions, pregnancy, malignancy among others.[2,3] Blood donation is when an individual gives/allows some of his/her blood to be used for medical purposes to help another person whereas blood transfusion is a process in which blood that has been taken from one person is put into another person´s system, especially after an accident or during operation/medical purposes.[4]

"Safe blood starts with me, blood saves lives." was the W.H.O theme for 2000 AD. Millions of people owe their lives to people they will never meet – people who donate their blood freely and without any reward. However, the overwhelming majority of the world's population has no access to safe and adequate blood.[3,4] Despite the crucial role of blood in management of patients with severe disease conditions, People in the developing countries, especially women, still die every day from complications related to pregnancy and childbirth. Also children die every day from severe anaemia secondary to malaria and/or malnutrition.[4] All these deaths could have been prevented if there was adequate supply of blood. Furthermore, an ideal donor should be between 17-70yrs, weigh at least 50kg, have not donated blood in the past 3months and must not have any of the transfusion transmitted infections (TTIs). The prospective donor should also have a normal PCV, 45-54% for males and 40-45% for females. Values below this range is considered anemia.[5]

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Blood donors fall into 3 types, voluntary, replacement and paid donors. –voluntary non-remunerated blood donor (VNRBD) is a person who gives blood and receives no payment for it, either in the form of cash, or in any kind that could be considered a substitute for money.[6] However currently, volunteer blood donors account for less than half of the blood supply in developing countries.[7]

Globally, there exist great differentials in the level of blood donation in the low, medium and high income countries, with donations lowest in countries with low Human Development Index (HDI) like Nigeria.[7]The situation is worst or further compounded in Africa by the HIV/AIDS pandemic reducing the eligible donor population as well as stretching the healthcare system to provide blood screening facilities, which are most times not available.

In the African sub-region, the requirement of blood for a population of over 773 million people is estimated at about 8 million units (10/1000 population), but currently a total of 3 191 784units (about 41.5% of the demand) is being realized. The regional target for voluntary blood collection (80%VNRBD) has been attained by 19 of the 46 countries.[8]Additionally the World Health Organization recommends blood donations of 2 to 5% of the population figure of a country. A target of 1.4million units per year for Nigeria in the short term and 2.8million units (2% of the population figure) in the long term would improve the blood supplies from the current position.[9]

There are very little published studies on the status of voluntary non-remunerated in the different states in the country. This study was conducted to assess the knowledge, attitude and practice of people living in Ekpoma, towards voluntary non-remunerated blood donation and transfusion and to identify motivating and barrier factors, with a view to providing recommendations, based on findings, on ways of encouraging the Ekpoma indigenes to donate blood voluntarily.

MATERIAL AND METHODS

The descriptive cross sectional study was conducted in Ekpoma, the administrative headquarter of Esan West Local Government Area (LGA) of Edo state in November 2013 among 422 residents of the community. A pre-tested semi-structured questionnaire was used for data collection and informed consent was obtained from all participants.

A questionnaire was prepared for the participants in English and explained in simple terms to the respondents for easy understanding. The respondents were guided through the questions as they filled the questionnaire. The pre-tested questionnaire was made up of questions that covered demographic characteristics, knowledge, attitude and practices about matters pertaining to blood donation as well as the frequency of blood donation practices.

Data were collected using self-administered questionnaires. This was given to the participants after obtaining an informed consent, through a consent form. The responses were collected, entered and analyzed with SPSS 16. The knowledge, attitude and practice were expressed in table and percentages. Chi square was applied to examine the association between knowledge, practice and independent variable like sex, age were applicable. Ethical approval was obtained from the Institutional Ethics committee.

RESULTS

Demographic

The table shows that majority of respondents in this study were males (58.1 %), 68.2% of the respondents fell within the age group (16-26) and minority (1.7%) fell in the age group (47-56). 99.1% respondents in this study were Christians and only (0.9%) were Muslims, there were no African traditionalist. Majority (53.8%) of respondents were students and minority (0.7%) farmers.

SOCIODERMOGRAPHIC VARIABLES	Frequency (422)	Percentage (%)
SEX		
Male	177	41.9
Female	245	58.1
AGE		
17-26	288	68.2
27-36	109	25.8
37-46	18	4.3
47-56	7	1.7
RELIGION		
Christianity	418	99.1
Muslim	4	0.9
MARITAL STATUS		
Married	124	29.4
Single	298	70.6
Divorced	0	0
Widow	0	0
LEVEL OF EDUCATION		
No Formal Education	0	0
Primary	4	0.9
Secondary	193	45.7
Tertiary	225	53.3
OCCUPATION		
Government Employee	74	17.5
Private	62	14.7
Self Employed	42	10.0
Farmer	3	0.7
Student	227	53.8
Unemployed	14	3.3

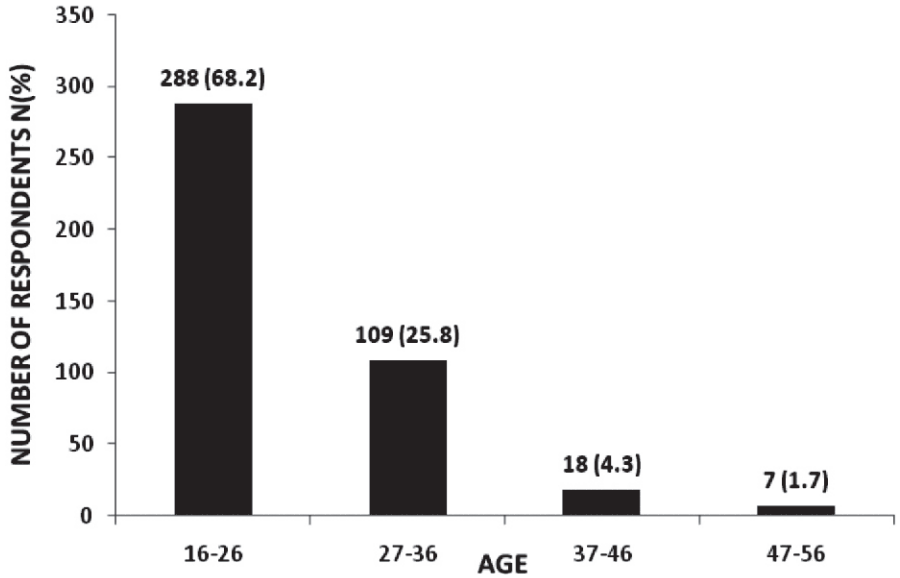

FIGURE 1: AGE DISTRIBUTION OF RESPONDENTS

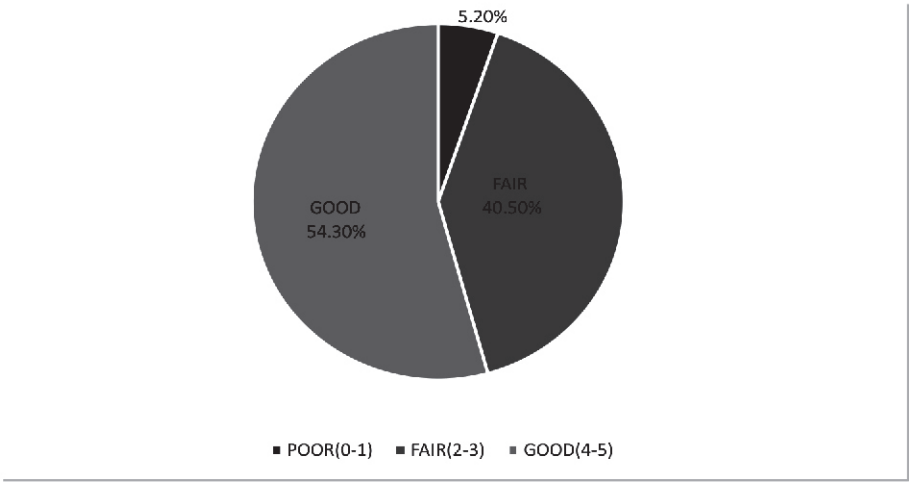

FIGURE 2: KNOWLEDGE ON BLOOD GROUP AND BLOOD DONATION BY RESPONDENTS

TABLE 2: KNOWLEDGE ON BLOOD GROUP AND BLOOD DONATION BY RESPONDENTS

KNOWLEDGE ON BLOOD TRANSFUSION		Frequency (N=422)	Percentage (%)
Awareness of A,B,AB,O Blood types		247	58.5
	Don't know	156	37.0
	No Response	19	4.5
	Others	0	0
	A	64	15.2
	B	16	3.8
	O	131	31.0
	AB	9	2.1
	Don't know	170	40.3
	No response	32	7.6
Can a person get infected by receiving blood?	Yes	394	93.4
	No	10	2.4
		18	4.3
	No response	0	0
How often can blood be donated by the same person?	Weekly	6	1.4
	Monthly	24	5.7
	Every three months	55	13.0
	Every six months	31	7.3
	Annually	56	13.3
	Don't know	229	54.3
	No response	21	5.0

The table above showed that (58.7%) of respondents are aware of all types of blood group in man. 40.3% of respondents do not know their blood group, while a total of (52.1%) of respondents are aware of the type of blood group they have. (93.4%) of respondents believe that a person can get infected by receiving blood. (1.4%) of respondents give blood weekly, (5.7%) give monthly, (13.0%) give 3 monthly, (7.3%) give 6 monthly and (13.3%) give annually.

TABLE 3: ATTITUDE OF RESPONDENTS TOWARDS BLOOD DONATION

ATTITUDE OF RESPONDENTS TOWARDS BLOOD DONATION		Frequency(n=422)	Percentage (%)
What do you think about blood donation?	Harmful	218	51.7
	Harmless	190	45.0
	Don't care	1	0.2
	Don't know	9	2.1
	No response	4	0.9
What is the best way to donate blood?	Voluntary non-remunerated	200	47.4
	Request of relatives	86	20.4
	Paid donations	39	9.2
	Autologous blood donation	19	4.5
	Don't know	59	14.0
	No response	19	4.5
Should people who donate blood receive anything in exchange?	Yes	39	9.2
	Yes sometimes	326	77.3
	No	24	5.7
	Don't know	33	7.8
	No response	0	0

The table above showed the attitude of respondents towards blood donation. (51.7%) of respondents believes that blood donation is harmful, while (45%) believes that it is harmful. (47.4%) of respondents believes that the best way to donate blood is via voluntary non-numerated donation, (20%) believes that blood donation is best done at patients request, (9.2%) believes that paid donation is the best way to donate blood and (4.5%) believes its best via autologous blood donation. (77.3%) of respondents suggests that people should receive incentives sometimes in exchange for blood donation, (5.7%) suggests otherwise.

TABLE 4: PRACTICE OF BLOOD DONATION BY RESPONDENTS

PRACTICE OF BLOOD DONATION		Frequency	Percentage (%)
Have you ever donated?	Yes	36	8.5
	No	386	91.5
Type of donations made	For use by a family member or friend	23	63.9
	For use by the general public	13	36.1
	Autologous transfusion	0	0
Why did you donate the first time?	Volunteered	14	38.9
	Relative or friend was sick	21	58.3
	For the benefits	0	0
	For money	1	2.8
	Interested in getting test results	0	0

The table above showed that (91.5%) of respondents have never donated blood. Out of (8.5%) of respondents who have donated blood, (63.9%) have donated to family members or friends and (36.1%) have donated for use by the general public. (58.3%) of respondents who have donated blood, donated for relatives and friends who were sick, (38.9%) donated voluntarily and (2.8%) donated for money.

TABLE 5: FACTORS MILITATING AGAINST DONATION IN FUTURE

		Frequency	Percent (%)
Do you ever now Wish to donate?	My health doesnot allow	38	22.8
	Fear of HIV infection	38	22.8
	Fear of infecting someone	20	12.0
	Fear of learning about my HIV status	4	2.4
	Against my religion	16	9.6
	Fear of damage to health	68	40.7
	Fear of the procedure	25	15.0

TABLE 6: MOTIVATING FACTORS FOR DONATIONS IN FUTURE.

		Frequency	Percent (%)
Do you ever wish to donate? YES	Ask me to donate	118	69.4
	More information on need to donate	47	27.6
	Program for recognizing donors	6	3.5
	Convenient donation location	30	17.6
	Convenient donation times	31	18.2
	Gifts	34	20.0
	Chance to win prizes	4	2.4

The table above showed that Majority (69.4%) of respondents would donate blood when asked to do so.

DISCUSSION

Blood transfusion can be life saving, hence maintaining an adequate and safe blood supply is an issue of concern to health planners especially with the increase in demand. Therefore, understanding the beliefs, attitude and level of knowledge associated with blood safety and donation is crucial to improving effectiveness of donor recruitment and retention programs.[10]. The baseline information obtained from this study will provide the preliminary information needed to guide the process and practice of blood donation especially as it concerns rural and peri-urban dwellers.

Regarding information about the blood donation, the respondents displayed a good knowledge. As majority (58.5%) of the respondents knew about blood grouping, with most knowing their blood group. This is in-keeping with findings in India, where almost all the respondents knew this correctly.[11] Also, most of the respondents (75%) knew that both men and women can donate blood, similar to findings in another study.[12]

In the present study, only 33% of the respondents had adequate knowledge of correct age limit for donating blood. This findings corroborate the works done in Iran[13], which reported that 45% in the general population had correct knowledge regarding minimum age requirement for blood donation. This findings contrast other studies in which only 3-6% of the respondents had good knowledge of correct age limit for donating blood.[9,14] Correct knowledge regarding the minimum gap between two donations was recorded in only 13% of the participants as also observed in other studies, were few of the participants knew it correctly.[15-18]However, another study reported that 75% of an urban population knew it correctly.[19] Less than one third of the respondents in this study knew the diseases transmitted through unscreened blood transfusion though nearly all knew that transfusion can be a source of infection. A similar finding was reported by other workers.[17,19]Also an Indian study revealed that 35% of the participants thought that blood donors can contract diseases.[11]

The level of knowledge on blood and donation, did not translate to good attitude towards the blood donation, as not much difference was noticed between level of knowledge and attitude of the respondents. The attitude being good, fair or poor attitude towards blood donation, was 34%, 32.5% and 33.4% respectively. This is similar to findings by other studies.[15-18]However these findings contrasted the studies in Saudi Arabia, where the level of knowledge translated to a positive attitude towards blood donation.[19]Also, for respondents aged 17-26years, those with good attitude was slightly more than those with poor attitude, compared to the higher aged groups in whom a majority had a poor attitude. This is a ray of hope for the prospect of increasing blood donation as recruit programmes can be targeted at this age group, who are either in secondary school or universities. This is in a bid to building a mind-set in favour of donating voluntarily, at an age when they are still malleable. A good attitude amongst younger age groups was also found in a study done in south western Nigeria.[11]

About half of respondents in the present study thought blood donation was harmful while 45% thought otherwise, which is similar to findings in a Nigerian study,[3]this is quite unfortunate especially for a country like Nigeria where the demand for blood is so high. As expected, more females thought blood donation was harmful. But generally, there was no relationship of statistical significance between attitude and sex in this present study. This is similar to findings in a Saudi Arabia, where though men also had a better attitude, there was no relationship between attitude and sex.[19] However, in other studies, men generally had a better attitude.[15-18]

The World Health Organization introduced the 100% unpaid, voluntary blood donation policy in 1997 and Voluntary non-renumerated blood donation(VNRBD) was recognized as the recommended method of providing safe and available blood and blood products (41).[20] Findings from this study suggest that a higher percentage (47.4%) of the respondents thought voluntary non-remunerated blood donation to be the best mode of donation, with about 20% suggesting that donation was best made at the request of a friends or relatives. Similarly, it was found that the large majority of youths (74%) in another study believed that paid donation is morally wrong, even though only 36% of them recommended banning the practice by law.[12] The obligation to help family members in need, including by blood donation, however was accepted by most. Furthermore, this study revealed that about 9% of respondents identified paid donation as the best mode of donation and according to respondents, rewards for blood donations should be money (60%), food (11%) and gifts (36%).This is rather unfortunate, especially as the world moves towards an era of VNRBD. With better enlightenment with well-directed information dissemination this situation can be improved.

People generally overestimate the health risk of blood donation. In this study, 51% of respondents perceived blood donation to be harmful, which was corroborated by findings in other studies.[15-18]Majority (61.9%) cited being temporarily weakened as a major effect of

donation, loss of health by 23.4% and 37% thought they could contract disease. This is similar to findings in Tanzania where respondents believed they could contract HIV from donating blood.[21] Similar results were also gotten from other studies with various misconceptions regarding the effect of blood donation on health. Blood donors may develop associated signs & symptoms such as transient dizziness, fainting attacks, and anaemia and cross infections. However, these side effects rarely occur in voluntary non-remunerated donors compared to paid donors who are known to have highest risk and prevalence of HIV, hepatitis and other blood transmitted infections[22-23]

In this present study, poor practice of blood donation was noticed among 78.4% of respondents. Among 156 donors, 59.6% have donated blood only once and 15.6% donated blood whenever there is a need. Majority (64.1%) of donors among respondents donated blood voluntarily, 31.4% had donated blood only for relatives or friends and 1.9% donated blood for money. This poor level of practice cuts across various studies.[15-18,24]

Furthermore, blood donation practice was better in males than females. While 17.5% of males have been donors, only 2% of females have donated blood. This correlates with the finding that only a small percentage (1%) of Nigerian females have been donors.[3] However, this contrasted the study in northern Nigeria, were 42.6% of females have donated blood.[25] The reasons for the lower rate in females included concerns for their health and the myth that they are the weaker sex.[3] In this study however, despite the wide gap between the percentage donors by sex, there is no statistically significant relationship between sex and donor status.

According to results from this study, majority (69.4%) of respondents identified being asked to donate as a major motivating factor towards blood donation. Next was availability of more information on blood and blood donation (27.6%) with about 22% asking for gifts or a chance to win a prize a motivating factor and 3.5% advocated for a programme for recognition of blood donors. Similar findings were found in a southern Indian population were about 90% of respondents said they will be interested in donating blood if they know the importance of blood donation. This indicates that proper awareness about blood donation or information on safe blood requirements were not percolated among the populace. Also, another study found that a relative or friend in need of blood was a motivating factor for about 65% of respondents.[4] Again, the factors which respondents thought should motivate people to donate blood, was the need by a family member or close friend came ? rst which accounted for 50%. The second most commonly suggested motivational factor was altruism (37%), while self-testing, especially for HIV, came a close third at 32%, and reward in cash or kind was fourth at 28% (33).[12] The findings further stresses the need for a radical information programme on blood donation.

On the other hand, non-donors who were unwilling to donate in future identified some inhibiting factors. Fear of damage to health (40.7%), fear of HIV infection (22.8%), Poor health (22.8%) and fear of the procedure (15%) were top on the list. fear of knowing their HIV status (2.4%) and religious barriers were identified as other reasons they wouldn't donate in future. This finding is similar to that of a other studies which reveal that the inhibiting factors in Nigeria included, poor health (17.1%), fear of needles (12.2%), fear of knowing their HIV status (2.4%) as inhibiting factors (1).[3,12] This gave an indication that people are not interested in participating in blood donation exercises due to fears. Only if people understood that blood was donated to help those in need, the fears as mentioned would not be of great concern to those who are expected to donate.

On the issue of possible measures to improving the current level of donation, use of mass media as a means of disseminating information on blood donation was topmost. Also, donor appreciation by medical staff came high in suggestions by respondents. This shows a somewhat altruist attitude. Improving information materials as well as the judicious use of the mass media was recognised as important factors. It is interesting to note that Ekpoma town, a peri-urban area, having access to most forms of media that could help raise awareness regarding whatever matters, was found to be lacking the expected awareness and motivation towards blood donation. This show a lack of use of already existing channels of communication to educate the people towards achieving an attitudinal change. As indicated earlier, they had adequate knowledge but they seemed not to have enough motivation. As a knowledgeable community, it is expected they would play an important leading role, use the knowledge they have in informing and raising awareness of the rest of the nearby uninformed communities about important matters, in this regard blood donation matters.

Of the respondents, 19% suggested giving money and other incentives as a way to improve donation. Similarly, 13.6% of the respondents in other studies preferred money as a necessity if donation is to be improved.[3,4] Also, it has been documented in some parts of Tanzania that people are willing to donate blood voluntarily following introduction of incentives.[26]

The desired appropriate practice of regular donation of

blood depends on appropriate knowledge and attitude levels. In other words, incomplete knowledge and negative attitudes regarding any matter, blood donation in this regard, are likely to induce non-compliance with desired behaviour practice. This was a general feeling that prevailed from the present study. The Nigerian government in general and specifically the National Blood Transfusion Services, need to appreciate the fact that, the low practice indicates a gap between knowledge/awareness, attitudes and the actual act of donating blood. The only way of surmounting this problem is for all hands to be on deck towards ensuring that the right information get to the people through appropriate channels. This would improve their attitude towards VNRBD with a snow-balling effect on the practice of blood donation.

The more people do not require any form of compensation before donation, the better for any blood transfusion services. People should reflect an altruistic behaviour and learn to give their blood voluntarily. The more compensation the people seek the more unsafe the blood will be. However, this can only be achieved with a radical drive to informing and educating the populace. Everybody, including individuals, institutions of learning, health facilities, non-governmental organization and the government have roles to play if this feat is to be achieved.

CONCLUSION

The residents of Ekpoma had good knowledge regarding blood donation. This was observed in 54.3% of respondents. Also, there was a fair attitude towards voluntary blood donation. However, majority (91.5%) of respondents never donated blood, and overall there was poor practice of blood donation as observed in 78.4% of the respondents. A significant association was observed between sex and blood donation as only 2% of females have been donors. There is prompt need for intensified advocacy as well as education and motivation through dissemination of information regarding blood donation particularly on electronic media.

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